

**ABSTRACT****MICROMACHINED GYROSCOPIC SENSOR WITH DETECTION IN THE PLANE OF THE MACHINED WAFER**

The invention relates to a microgyroscope, that is to say an inertial micromechanical sensor dedicated to the measurement of angular velocities, which is produced by micromachining techniques on a silicon wafer. The gyroscope comprises two symmetrical moving assemblies (30, 50; 30', 50') coupled via a coupling structure (20, 20', 22). Each of the two assemblies comprises a moving mass [(30)] surrounded by a moving intermediate frame [(50)]. The frame [(50)] is connected to the coupling structure (20, 20', 22) and can vibrate in two degrees of freedom in orthogonal directions Ox and Oy in the plane of the wafer. The mass [(30)] is connected on one side to the frame and on the other side to fixed anchoring regions (34, 36) via linking means (40-46; 52-58) that allow the vibration movement along the Oy direction to be transmitted to the mass without permitting movement of the mass along the Ox direction. An excitation structure [(70)] is associated with the frame in order to excite its vibration along Ox. A movement detection structure [(90)] is associated with the mass [(30)] in order to detect its vibration along Oy.

**Figure 1.**